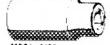
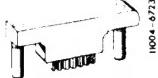
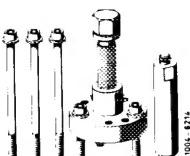
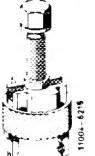


03–350 Removal and installation of crankshaft sprocket

| Tightening torques | Nm |
|--|---|
| Bolt M 18 x 1.5 x 45 on crankshaft | 400–450 |
| Bolts and capped nuts for cylinder head cover | 5 |
| Special tools | |
| Torque wrench 150–500 Nm (15–50 kpm), 3/4" square |  001 589 31 21 00 |
| Socket 27 mm, 1/2" square |  001 589 65 09 00 |
| Detent |  110 589 00 40 00 |
| Detent |  116 589 01 40 00 |
| Puller for balancing disc |  116 589 10 33 00 |
| Puller for spacing ring |  102 589 00 33 00 |
| Crankshaft sprocket extractor |  615 589 01 33 00 |
| Bearing pin impact extractor (basic unit) |  116 589 20 33 00 |
| Threaded pin M 6 x 50 for impact extractor |  116 589 01 34 00 |
| Threaded pin M 10 x 100 for impact extractor |  116 589 03 34 00 |
| Stud socket 10 mm, 1/2" square, 140 mm long |  000 589 05 07 00 |
| Radial oil seal installer |  110 589 07 61 00 |

Chain tensioner holder



110 589 02 31 00

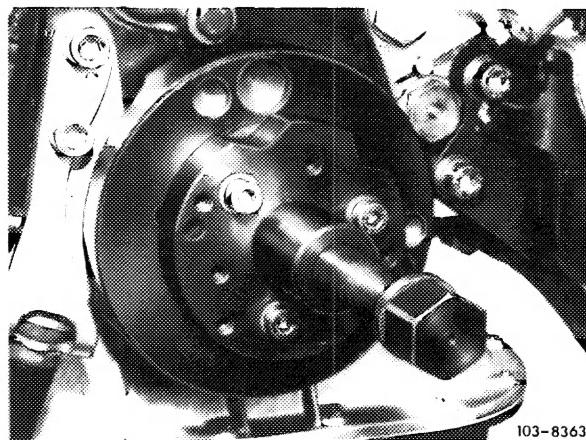
Knocking-out mandrel 9 mm dia



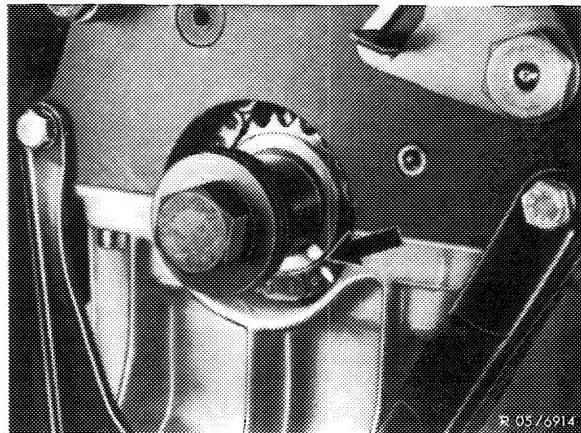
110 589 02 15 00

Removal

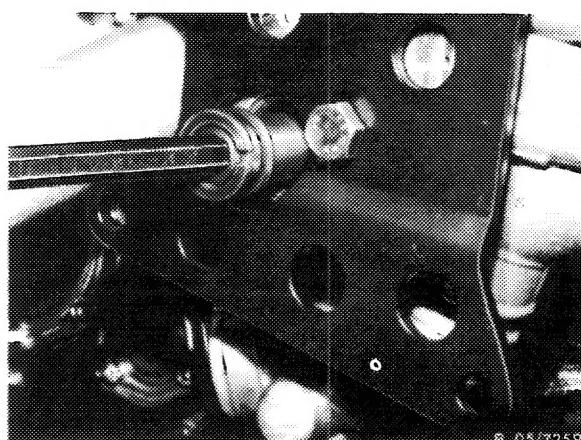
- 1 Remove radiator and fan.
- 2 Remove front crankshaft radial oil seal (03-324).



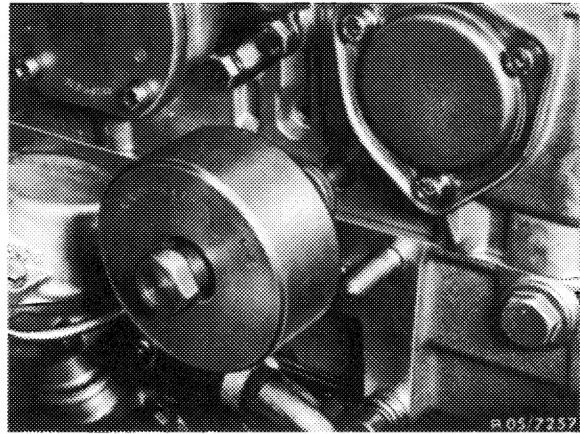
- 3 Use paint to mark both camshaft sprockets and camshaft sprocket to timing chain (arrow).



- 4 Remove chain tensioner (05-310).



5 Remove guide rail in camshaft housing.

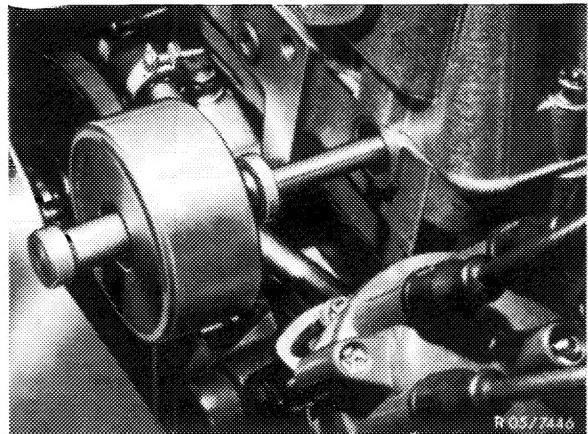


R 05/2237

6 Remove reversing wheel. This requires unscrewing the plug and knocking out the bearing pin with an impact extractor (M 10 threaded pin).

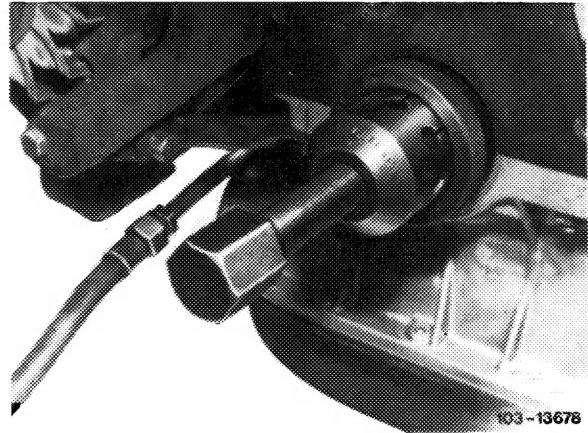
7 Remove reversing wheel with a wire hook upward.

8 Remove oil pan to an extent that the timing chain can be taken off of the crankshaft sprocket.



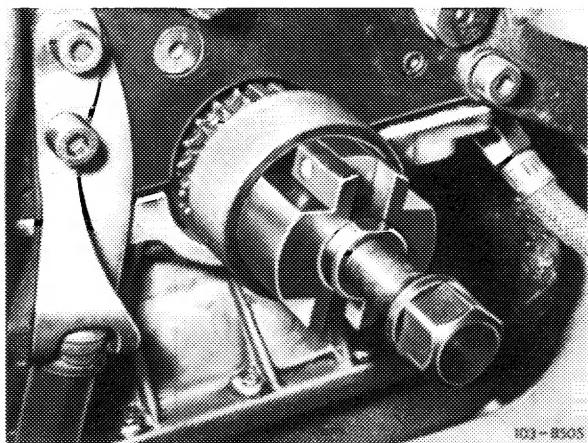
R 05/77446

9 Pull-off spacing ring with puller.



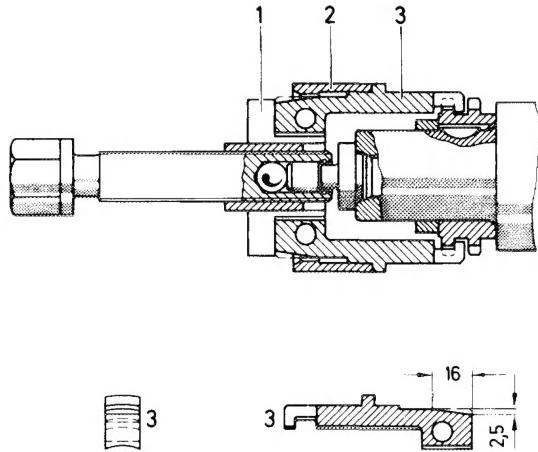
103 - 13678

10 Pull off crankshaft sprocket with an extractor.



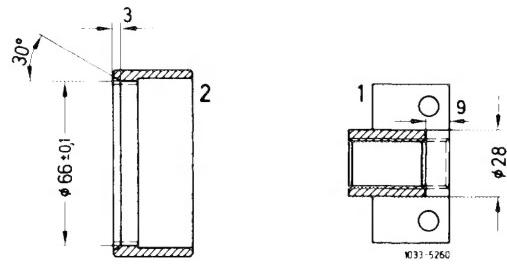
103 - 8505

Note: Change puller 615 589 01 33 00 to dimensions shown in drawing.



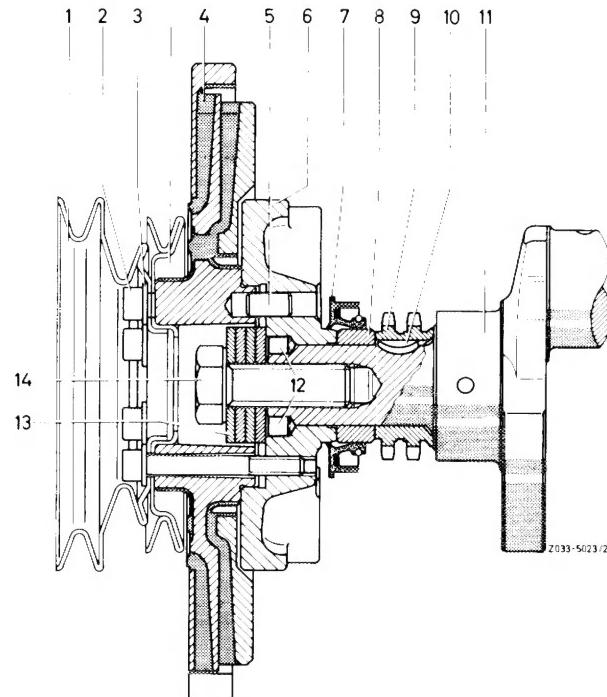
Installation

- 11 Transfer color marks from old to new crankshaft gear.



- 12 Heat crankshaft gear on a hot plate (approx. 80 °C) and slip on crankshaft.

- 13 Slip spacing ring on crankshaft.



- 14 For further installation proceed vice versa, paying attention to pertinent color marks.